



**SAMBU**  
**HOT-MELT**  
INTRODUCTION  
VERSION 3

# LOW MELTING TEMPERATURE HOT-MELT FILM

Adhesive Films		NASA-LQ	NASA-LQ BIO	NASA-MM	NASA-MM BIO	NASA-G3	
<b>Base polymer</b>		TPU	TPU	TPU	TPU	TPU	
<b>Spec</b>	Width(inch)	44",47",54"	44",47",54"	44",47",54"	44",47",54"	44",54"	
	Thickness( $\mu\text{m}$ )	50~200	80-200	60~180	80-200	50~200	
<b>Carrier</b>		PP	PP	Paper/PP	Paper/PP	PP	
<b>Melting Point</b>	( $^{\circ}\text{C}$ )	95 $\pm$ 5	100 $\pm$ 5	105 $\pm$ 5	110 $\pm$ 5	80 $\pm$ 5	
<b>Melt Index</b>	177 $^{\circ}\text{C}$ , 2.16kg (g/10min)	22-28	10-20	13-23	10-20	2-12	
<b>Working Condition</b>	Process Temperature( $^{\circ}\text{C}$ )	100~120 $^{\circ}\text{C}$	100~120 $^{\circ}\text{C}$	115~120	115~120	90~110 $^{\circ}\text{C}$	
	Working Time(sec)	30-35	30-35	20-25	20-25	30-35	
	Oil Pressure(kgf/ $\text{cm}^2$ )	60-70	60-70	45-60	45-60	60-70	
	Air Pressure(kgf/ $\text{cm}^2$ )	3-7				3-7	
<b>Applicable Material</b>							
<b>Textile</b>	Cotton Span(Lycra)	Excellent	Excellent	Excellent	Excellent	Excellent	
	Acetate	Excellent	Excellent	Excellent	Excellent	Excellent	
	Polyester	Excellent	Excellent	Excellent	Excellent	Excellent	
	Glossy Nylon	Good	Good	Good	Good	Good	
	Felt (Non-woven)	Excellent	Excellent	Excellent	Excellent	Excellent	
<b>Synthetic Resin</b>	TPO(Thermo Plastic Olefin)	Good	Good			Good	
	PC(Polycarbonate)	Excellent	Excellent	Excellent	Excellent	Excellent	
	PET(Polyethylene Terephthalate)	Good	Good	Good	Good	Good	
	EVA(Ethylene Vinyl Acetate)	Good	Good			Good	
	PS(Polystyrene, Styrofoam)	Good	Good	Good	Good	Good	
	ABS(Acrylonitrile Butadiene Styrene)	Excellent	Excellent	Excellent	Excellent	Excellent	
	FRP(Fiber Reinforced Plastics)	Good	Good	Good	Good	Good	
		Rubber					
<b>Inorganic compound</b>	Synthetic Leather	Excellent	Excellent	Excellent	Excellent	Excellent	
	Natural Leather	Excellent	Excellent	Good	Good	Excellent	
		Aluminum	Excellent	Excellent	Good	Good	Excellent
<b>Material</b>		Stainless	Excellent	Excellent	Good	Good	Excellent
		Copper	Excellent	Excellent	Good	Good	Excellent
		Wood(MDF)	Excellent	Excellent	Excellent	Excellent	Excellent
<b>Others</b>		Paper	Excellent	Excellent	Good	Good	Excellent
		Glass					Good
	<b>Remark</b>	NASA-LQ : Stretchable, low melting temperature for sensitive materials NASA-LQ BIO : Bio-based version of NASA-LQ NASA-MM : Low-melting point, thin, soft, light and high bonding score NASA-MM BIO : Bio-based version of NASA-MM NASA-G3 : Bonding with Nylon, fine jacquard woven & Epoxy, PC, Acryl plate					

# NASA-T SERIES HOT-MELT FILM

Adhesive Films		NASA-T	NASA-T NP	NASA-T1	NASA-T REC	NASA-TT	NASA-TT BIO	NASA-TT BIO CL
<b>Base polymer</b>		TPU	TPU	TPU	TPU	TPU	TPU	TPU
<b>Spec</b>	Width(inch)	44",47",54"	44",47",54"	44",47",54"	44",47",54"	44",47",54"	44",47",54"	44",47",54"
	Thickness( $\mu\text{m}$ )	50~300	50~300	40~230 (Main:150)	50~300	60~180	70~210	70~210
<b>Carrier</b>		Paper/PP	Paper/PP	Paper/PP	Paper/PP	Paper/PP	Paper/PP	NO Carrier
<b>Melting Point</b>	( $^{\circ}\text{C}$ )	118 $\pm$ 5	118 $\pm$ 5	118 $\pm$ 5	118 $\pm$ 5	118 $\pm$ 5	120 $\pm$ 5	120 $\pm$ 5
<b>Melt Index</b>	177 $^{\circ}\text{C}$ , 2.16kg (g/10min)	8-14	8-14	8-14	8-14	8-14	8-16	8-16
<b>Working Condition</b>	Process Temperature( $^{\circ}\text{C}$ )	130~150	130~150	130~150	130~150	130~150	130~150	120~140
	Working Time(sec)	30-35	30-35	30-35	30-35	20-25	20-25	
	Oil Pressure(kgf/ $\text{cm}^2$ )	60-70	60-70	60-70	60-70	45-60	45-60	
	Air Pressure(kgf/ $\text{cm}^2$ )							3~10
<b>Applicable Material</b>								
<b>Textile</b>	Cotton Span(Lycra)	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
	Acetate	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
	Polyester	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
	Glossy Nylon	Good	Good	Good	Good	Good	Good	Good
	Felt (Non-woven)	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
<b>Synthetic Resin</b>	TPO(Thermo Plastic Olefin)							
	PC(Polycarbonate)	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
	PET(Polyethylene Terephthalate)	Good	Good	Good	Good	Good	Good	Good
	EVA(Ethylene Vinyl Acetate)							
	PS(Polystyrene, Styrofoam)	Good	Good	Good	Good	Good	Good	Good
	ABS(Acrylonitrile Butadiene Styrene)	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
	FRP(Fiber Reinforced Plastics)	Good	Good	Good	Good	Good	Good	Good
<b>Inorganic compound</b>	Rubber							
	Synthetic Leather	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
	Natural Leather	Good	Good	Good	Good	Good	Good	Good
<b>Material</b>	Aluminum	Good	Good	Good	Good	Good	Good	Good
	Stainless	Good	Good	Good	Good	Good	Good	Good
	Copper	Good	Good	Good	Good	Good	Good	Good
<b>Others</b>	Wood(MDF)	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
	Paper	Good	Good	Good	Good	Good	Good	Good
	Glass							
<b>Remark</b>	NASA-T : For open mesh, PU Skin coating NASA-T NP: UV enhanced version of NASA-T NASA-T1 : Softer and lighter than NASA-T 0.2mm, Upgrade version of NASA-T NASA-T REC : Recycled version of NASA-T NASA-TT : Thin, soft, light, and high bonding score version Hot-melt. NASA-TT BIO : Bio-based version of NASA-TT NASA-TT BIO CL : NO carrier Bio-based version of NASA-TT							

# SPECIAL HOT-MELT FILM

Adhesive Films		NASA-600	NASA-V	NASA-Q	NASA-100PL	NASA-100+	NASA-150+
<b>Base polymer</b>		TPU	TPU	TPU	TPO	TPO	TPO
<b>Spec</b>	Width(inch)	44",47",54"	47"	44",47",54"	44"	44", 54"	44", 54"
	Thickness( $\mu\text{m}$ )	50~300	170, 250, 400, 500	50~300	50/100	35~50	35~50
<b>Carrier</b>		Paper/PP	Paper/PP	Paper/PP	Paper	No RP	No RP
<b>Melting Point</b>	( $^{\circ}\text{C}$ )	118 $\pm$ 5	118 $\pm$ 5	115 $\pm$ 5	100 $\pm$ 5	100 $\pm$ 5	70 $\pm$ 5
<b>Melt Index</b>	177 $^{\circ}\text{C}$ , 2.16kg (g/10min)	20-26	8-14	14-20	2-6	2-8	35 $\pm$ 5
<b>Working Condition</b>	Process Temperature( $^{\circ}\text{C}$ )	130~150	130~150 $^{\circ}\text{C}$	130~150 $^{\circ}\text{C}$	100~120 $^{\circ}\text{C}$	100~120 $^{\circ}\text{C}$	100~120 $^{\circ}\text{C}$
	Working Time(sec)	30-35	30-35	30-35	30-35	30-35	30-35
	Oil Pressure(kgf/ $\text{cm}^2$ )	60-70	60-70	60-70	60-70	60-70	60-70
	Air Pressure(kgf/ $\text{cm}^2$ )				3-7	3-7	3-7
<b>Applicable Material</b>							
<b>Textile</b>	Cotton Span(Lycra)	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
	Acetate	Excellent	Excellent	Excellent	Good	Good	Good
	Polyester	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
	Glossy Nylon	Good	Good	Good	Good	Good	Good
	Felt (Non-woven)	Excellent	Excellent	Excellent	Good	Good	Good
<b>Synthetic Resin</b>	TPO(Thermo Plastic Olefin)				Excellent	Excellent	Excellent
	PC(Polycarbonate)	Excellent	Excellent	Excellent	Good	Good	Good
	PET(Polyethylene Terephthalate)	Good	Good	Good			
	EVA(Ethylene Vinyl Acetate)				Excellent	Excellent	Excellent
	PS(Polystyrene, Styrofoam)	Good	Good	Good			
	ABS(Acrylonitrile Butadiene Styrene)	Excellent	Excellent	Excellent			
	FRP(Fiber Reinforced Plastics)	Good	Good	Good			
<b>Inorganic compound</b>	Rubber				Good	Good	Good
	Synthetic Leather	Excellent	Excellent	Excellent	Good	Good	Good
	Natural Leather	Good	Good	Good	Good	Good	Good
<b>Material</b>	Aluminum	Good	Good	Good			
	Stainless	Good	Good	Good			
	Copper	Good	Good	Good			
<b>Others</b>	Wood(MDF)	Excellent	Excellent	Excellent	Good	Good	Good
	Paper	Good	Good	Good	Good	Good	Good
	Glass				Good	Good	Good
<b>Remark</b>	NASA-600 : For close / fine mesh, PU Skin coating NASA-V : TPU with Hot-melt film layer; Two layer Hot-melt. NASA-Q : For stretchable substrate NASA-100PL : EVA foam and polyester Textile NASA-100+ : EVA foam and Polyester Textile NASA-150+ : EVA foam and polyester Textile (Melting point is lower than NASA-100+)						



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